

Claims

- [c1] 1. An integrated circuit comprising:
a major circuit providing a major function;
a trimming circuit being trimmable for adjusting and fixing an electric characteristic of said integrated circuit;
a simulating device simulating an operation of said trimming circuit and sending out a simulating signal to temporarily change said electric characteristic of said integrated circuit; and
a multiplexer having an output terminal, a plurality of input terminals, and a selection terminal, said output terminal being coupled to said major circuit, said plurality of input terminals being coupled to said trimming circuit and said simulating device.
- [c2] 2. The circuit of claim 1, wherein said selection terminal of said multiplexer receives a selection signal to select one of said simulating device and said trimming circuit to connect said major circuit.
- [c3] 3. The circuit of claim 2, wherein when performing a simulating operation, said multiplexer connects said simulating device to said major circuit in response to said selection signal, and said simulating device sends

out said simulating signal based on said electric characteristic of said integrated circuit.

- [c4] 4. The circuit of claim 3, wherein said simulating signal is sent to said major circuit to temporarily change said electric characteristic of said integrated circuit.
- [c5] 5. The circuit of claim 2, wherein when performing a trimming operation, said multiplexer connects said trimming circuit to said major circuit in response to said selection signal.
- [c6] 6. The circuit of claim 5, wherein when performing said trimming operation, said trimming circuit is trimmed based on said electric characteristic of said integrated circuit, said electric characteristic of said integrated circuit being fixed after said trimming operation.
- [c7] 7. An integrated circuit, said integrated circuit being simulated and trimmed in a testing system, said testing system including a testing device and a simulating device, said integrated circuit comprising:
 - a major circuit, coupled to said test device, providing a major function;
 - a trimming circuit being trimmed for adjusting and fixing an electric characteristic of said integrated circuit;
 - and

a multiplexer having an output terminal, a plurality of input terminals, and a selection terminal, said output terminal being coupled to said major circuit, said plurality of input terminals being coupled to said trimming circuit and said simulating device.

- [c8] 8. The circuit of claim 7, wherein said selection terminal of said multiplexer receives a selection signal to select one of said simulating device and said trimming circuit to connect said major circuit.
- [c9] 9. The circuit of claim 8, wherein when performing a simulating operation, said multiplexer connects said simulating device to said major circuit in response to said selection signal.
- [c10] 10. The circuit of claim 9, wherein when performing said simulating operation, said testing device detects said electric characteristic of said integrated circuit and obtains a trimming parameter.
- [c11] 11. The circuit of claim 10, wherein said simulating device sends a simulating signal to said major circuit based on said trimming parameter to temporarily change said electric characteristic of said integrated circuit.
- [c12] 12. The circuit of claim 8, wherein when performing a trimming operation, said multiplexer connects said trim-

ming circuit to said major circuit in response to said selection signal in order to trim said trimming circuit and to change and fix said electric characteristic of said integrated circuit.

[c13] 13. A method for simulating and trimming an integrated circuit, comprising:

detecting an electric characteristic of said integrated circuit;

obtaining a trimming parameter based on said electric characteristic of said integrated circuit;

simulating a trimming operation to adjust said electric characteristic of said integrated circuit so that said electric characteristic of said integrated circuit is within an allowable range; and

trimming said integrated circuit based on said trimming parameter.

[c14] 14. The method of claim 13, wherein said integrated circuit includes a multiplexer, a trimming circuit, and a major circuit, said step of simulating a trimming operation comprising:

said multiplexer connecting said major circuit and a simulating device;

said simulating device sending out a simulating signal based on said trimming parameter;

detecting said electric characteristic of said integrated

circuit;

determining whether said electric characteristic of said integrated circuit meets a requirement; and

adjusting said trimming parameter based on said electric characteristic of said integrated circuit if said electric characteristic of said integrated circuit does not meet said requirement, and going back to said step of said simulating device sending out a simulating signal based on said trimming parameter.

[c15] 15. The method of claim 13 further comprising trimming said integrated circuit based on said trimming parameter without performing said step of simulating said trimming operation if said step of simulating said trimming operation is not desired.